Health Risks and Preventive Behavior among Massachusetts Adults, 1996

Results from the Behavioral Risk Factor Surveillance System

Chronic Disease Surveillance Program ¨ Massachusetts Department of Public Health

December 1998

Introduction

The Behavioral Risk Factor Surveillance System (BRFSS) is an annual, random, statewide telephone survey of Massachusetts adults 18 years of age and older. Through cooperative agreements with the Centers for Disease Control and Prevention (CDC) and state Departments of Public Health, similar surveys are conducted in all states. The BRFSS collects information about a wide variety of health issues, ranging from health-related behavior and access to medical care, to opinions on health-related policy issues. Responses to these questions provide important information about the prevalence of risk factors that are responsible for many of the causes of premature death, illness, and disability among Massachusetts residents.

The information obtained in this survey assists in identifying the need for health interventions, monitoring effectiveness of intervention and prevention programs, developing health policy and legislation, and measuring progress toward attaining state and national health objectives.

This report summarizes some of the important results from the 1996 survey. To identify groups in the population at increased risk, we have highlighted differences in risk status by sex, age, race/ethnicity, education, income, and other characteristics of interest. When possible, we have compared results from the 1996 survey to previous years' Massachusetts data, 1996 United States data, and Healthy People 2000 objectives.

Highlights

	MASSACHUSETTS ADULTS (%)	NATIONAL MEDIAN (%)	NATIONAL RANKING *
FAIR OR POOR HEALTH	12%	13%	22nd
UNINSURED	11%	13%	11th
CURRENT SMOKERS	23%	23%	22nd
OVERWEIGHT	26%	29%	7th
ANY PHYSICAL ACTIVITY	78%	72%	11th
5 + SERVINGS OF FRUIT & VEGETABLES	26%	24%	14th
MAMMOGRAM AND CLINICAL BREAST EXAM IN PAST 2 YEARS **	74%	64%	3rd
PAP SMEAR WITHIN PAST 3 YEARS	84%	85%	27th

* COMPARED TO STATES REPORTING LOWEST RISK OR HEALTHIEST BEHAVIOR: 1ST = BEST, 50TH = WORST. NATIONAL RANKINGS WERE TAKEN FROM CDC 1996 BEHAVIORAL RISK FACTOR SURVEILLANCE SYSTEM PREVALENCE REPORT

** AMONG WOMEN 50 AND OLDER

Health Status

Twelve percent of Massachusetts adults rated their overall health status as fair or poor. The elderly, Hispanics, and those with lower levels of education or income were more likely to have reported poorer health. Six percent of adults described their physical health as not good for at least half of the previous month. A similar percentage of the population said that their mental health that was not good for that amount of time.

There has been a small but significant increase in the proportion of Massachusetts adults with fair or poor health since 1992 (figure 3). In 1996, Massachusetts was the 22nd lowest among all states in the percent of adults who described their health as fair or poor. The national median was 13%.

Nineteen percent of residents were limited in some activity because of an impairment or health problem. Older adults (figure 1) and persons with lower levels of education or income were more likely to have limitations.

Among adults with impairments, 84% had long-term impairments of one year or more. Individuals with long-term impairments were more likely to be in poor mental or physical health than Massachusetts residents without any impairments (Figure 2). Thirty-one percent of adults with long-term impairments required help with either personal care needs or routine daily living needs. Individuals with long-term disabilities were more likely to report that poor health kept them from doing their usual activities (12%) for more than half of the last month compared to adults without any impairments (2%).

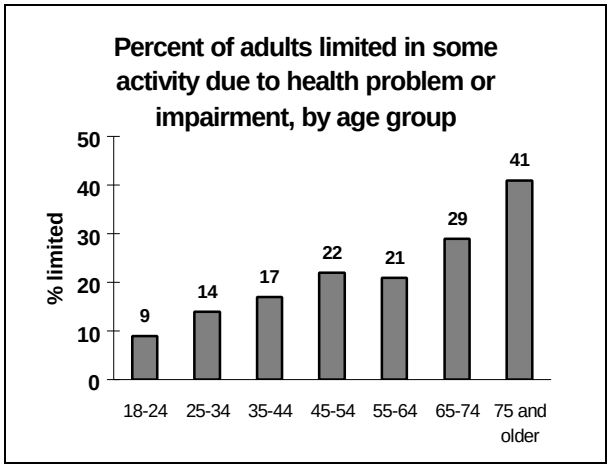

Figure 1 **Source: 1996 Massachusetts BRFSS**

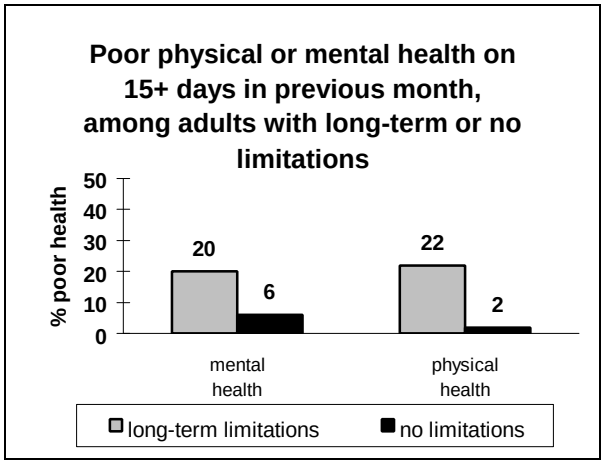

Figure 2 **Source: 1996 Massachusetts BRFSS**

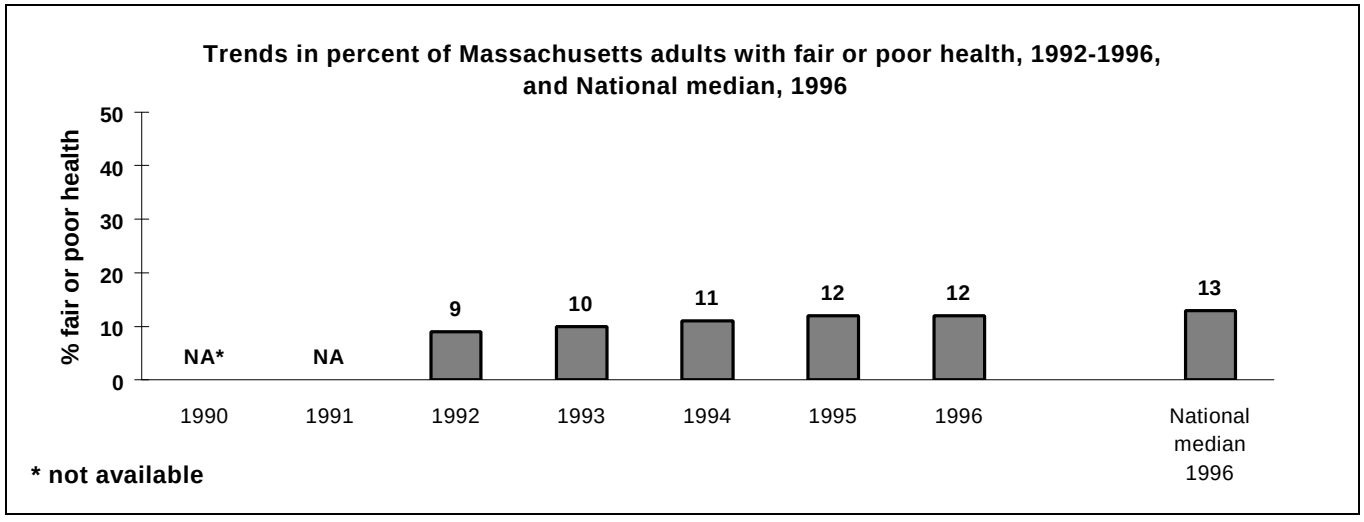

Figure 3 **Source: Massachusetts BRFSS, National BRFSS**

Health Care Access

Approximately 11% of Massachusetts adults were without health insurance in 1996. Several demographic groups were more likely to be uninsured: males, adults age 18-24 years old, Hispanics, and those with lower income (figure 4), less education, or who were self-employed or unemployed.

Among uninsured persons between ages 18 to 65, 58% had been without health insurance for more than one year, and 25% were uninsured for more than 5 years. The main reasons that people were without any insurance were: inability to afford the premiums (30%); loss or change of jobs (30%); lack of employer coverage (10%); and loss of eligibility because of age or leaving school (10%).

71% of adults had a routine check-up within 12 months, although the percent varied depending on whether an individual had insurance. 74% of insured adults received a yearly check-up compared to 46% of those without insurance. Uninsured Massachusetts adults were much more likely than insured residents to have been unable to see a doctor in the past year because of the cost (figure 5).

The proportion of Massachusetts adults without health insurance has changed little over time since 1991 (figure 6). In 1996, the percent of adults without health insurance in Massachusetts was lower than the national median and was 11th lowest compared to other states.

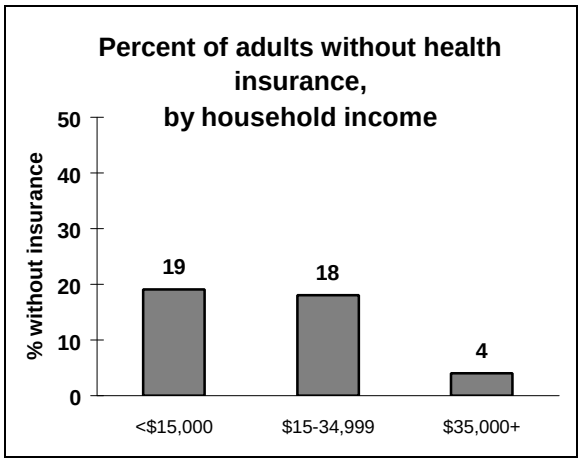

Figure 5 **Source: 1996 Massachusetts BRFSS**

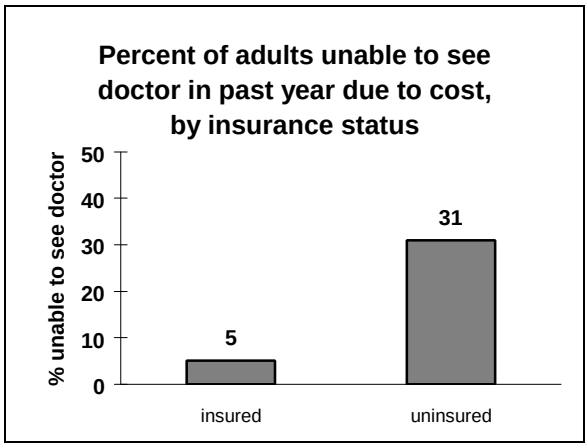

Figure 6 **Source: 1996 Massachusetts BRFSS**

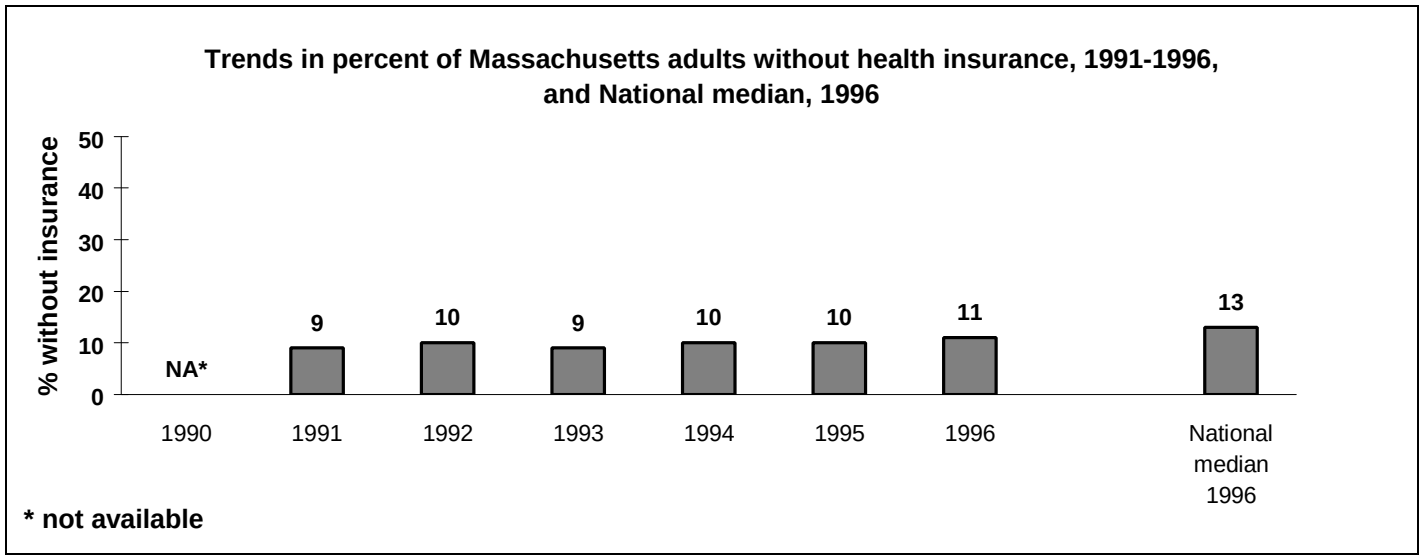

Figure 4 Source: Massachusetts BRFSS, National BRFSS

Smoking

Approximately 23% of Massachusetts adults were current smokers in 1996. Smoking rates were lower among college graduates (figure 7) and those whose household income was greater than $50,000. Women were as likely as men to be current smokers. 21% of current smokers did not smoke everyday. Daily smokers smoked an average of 19 cigarettes per day, compared to non-daily smokers who smoked 6 cigarettes on the days that they smoked.

A large majority of smokers said that they would like to quit smoking (78%). Among smokers age 18-50, those with children under age 5 were more likely than those without young children to say they wanted to quit smoking (88% vs. 69%). 45% of all daily smokers tried to quit smoking for at least one day in the past year. Younger smokers were more likely to have made a quit attempt (figure 8), as were individuals who smoked fewer than 10 cigarettes per day.

The smoking prevalence in Massachusetts has remained essentially unchanged since 1990 (figure 9).[1] Compared to other states in 1996, Massachusetts had the 22nd lowest prevalence of current smokers. The Healthy People 2000 objective is to reduce the proportion of adults age 18 and older who smoke to no more than 15%.

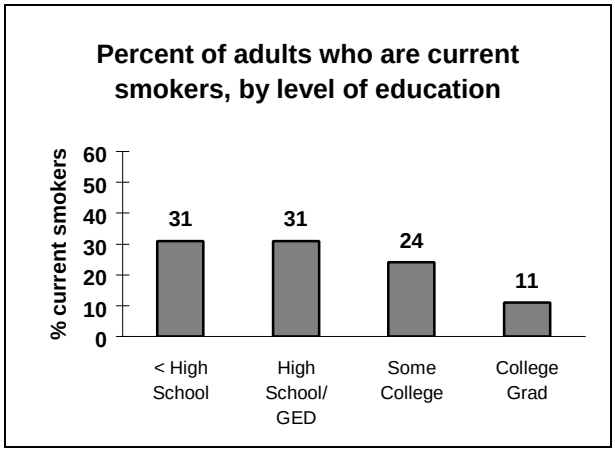

Figure 7 **Source: 1996 Massachusetts BRFSS**

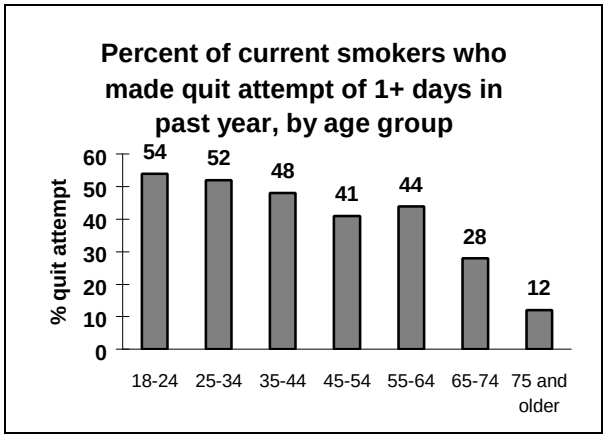

Figure 8 **Source: 1996 Massachusetts BRFSS**

[1] This pattern differs from the Massachusetts Adult Tobacco Survey, which has found a decrease in smoking prevalence from 23% in 1993 to 21% in 1996.

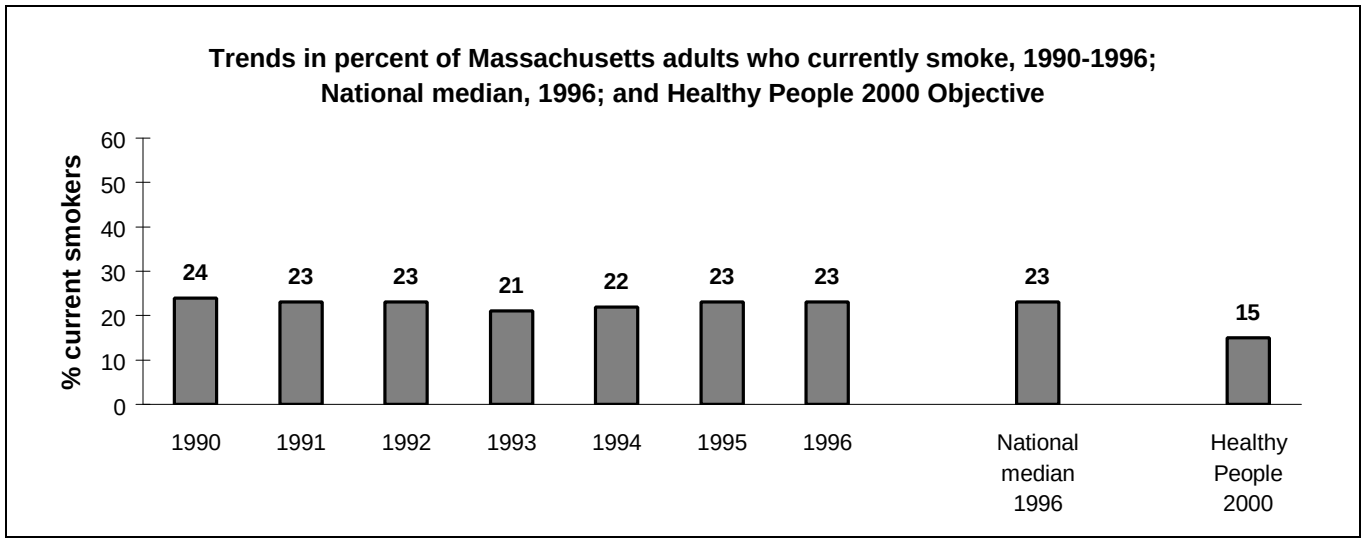

Figure 9 **Source: Massachusetts BRFSS, National BRFSS, and Healthy People 2000**

Weight

In 1996, 26% of Massachusetts adults were overweight, based on body mass index (BMI).[1] The percent of overweight adults increased with age until ages 45-54 and then decreased after age 75 (figure 10). Adults with higher levels of education were less likely to be overweight. A higher proportion of Blacks and Hispanics were overweight, due to a higher prevalence among women in these groups.

The percent of Massachusetts residents who were overweight increased from 19% in 1990 to 26% in 1996. The national median in 1996 was 29% (figure 12). Compared to other states, Massachusetts had the seventh lowest prevalence of obesity. The Healthy People 2000 objective is to reduce the proportion of individuals age 20 and older who are overweight to no more than 20%.

38% of adults were trying to lose weight at time of interview, although proportions varied by an individual's sex and weight. Women (44%) were more likely than men (31%) to be trying to lose weight. The proportion of people attempting weight loss increased with increasing BMI (Figure 11).

Sex, education, and receipt of advice from a doctor influenced whether an overweight person was trying to lose weight. Overweight women were more likely than men (74% vs. 61%) to be trying to lose weight. Higher levels of education also increased the likelihood of attempting weight loss. Overweight individuals who were advised by a doctor to lose weight were more likely to try (82%) than were those who received no advice (61%).

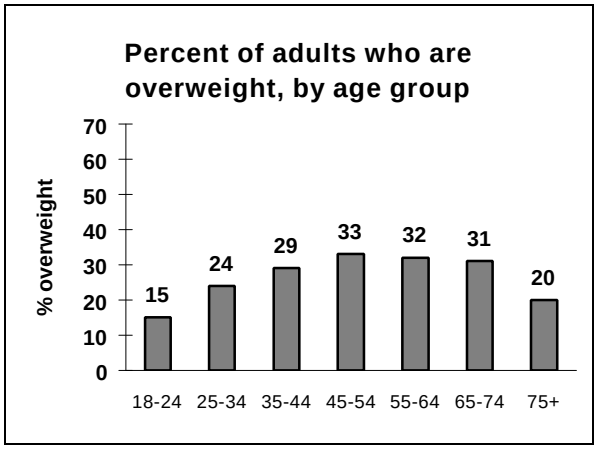

Figure 9 **Source: 1996 Massachusetts BRFSS**

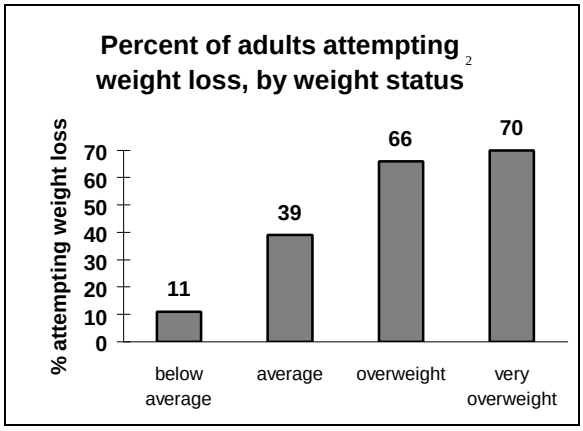

Figure 10 **Source: 1996 Massachusetts BRFSS**

[1] BMI is calculated by dividing a person's weight in kilograms by height in meters squared (kg/m^2).

[2] BMI for Men: below average weight < 20.7; average 20.7-27.8; overweight 27.8-31.1; very overweight > 31.1. BMI for Women: below average <19.1; average 19.1-27.3; overweight 27.3-32.3; very overweight > 32.3.

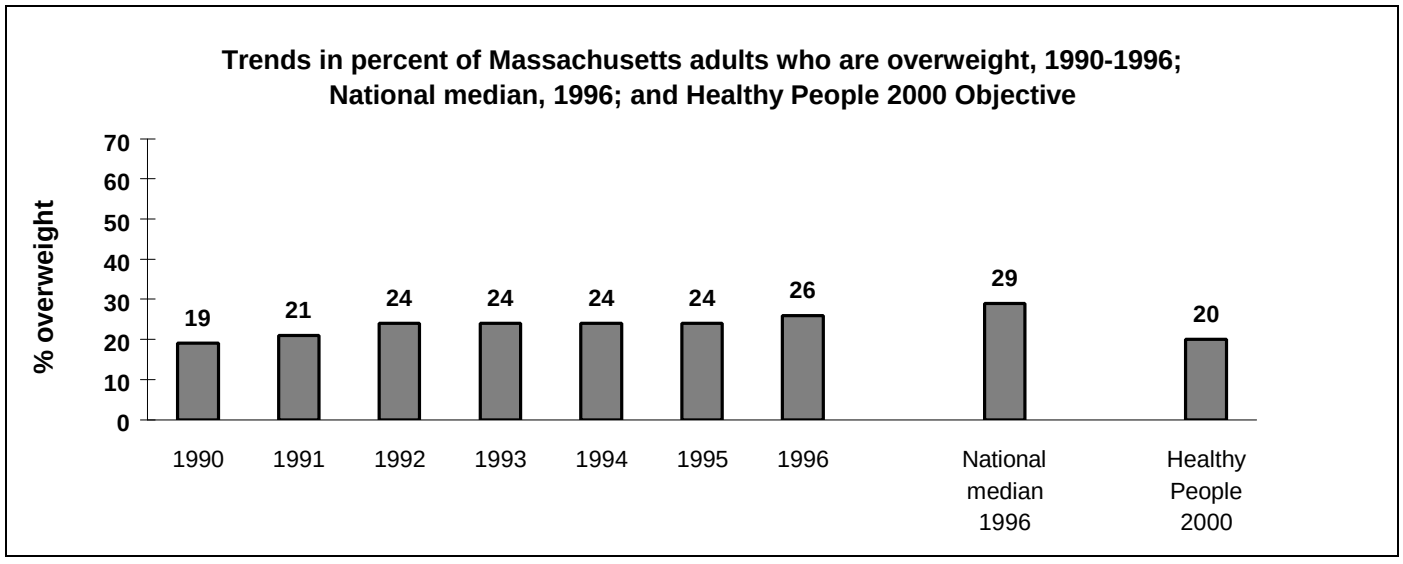

Figure 12 Source: Massachusetts BRFSS, National BRFSS, Healthy People 2000

Physical Activity

The health benefits of physical activity are well documented and include lowering risk of heart disease, diabetes, and stroke. The Surgeon General defines regular physical activity as 30 minutes of moderate activity 5 times per week, or 20 minutes of vigorous exercise 3 times per week.

In Massachusetts, 32% of residents engaged in leisure time physical activity at recommended levels. Individuals with higher education (figure 13) or higher income were more likely to exercise regularly. Common types of activity in which men and women partook are shown in Table 1.

Seventy-eight percent of Massachusetts adults had engaged in some leisure time physical activity in the previous month. Older people and those with lower levels of education or income were less likely to participate. 72% of overweight people took part in some physical activity, compared to 80% of people at average weight or less. Adults in fair or poor health were less likely to exercise (60%) compared to those who reported good, very good, or excellent health (80%). Both men and women cited lack of time and health problems as the most common reasons for not engaging in any physical activity.

In Massachusetts, the percent of adults participating in any physical activity has changed little over time (figure 14). In 1996, a higher percent of Massachusetts adults participated in physical activity compared to the national median; Massachusetts ranked 11th among all states. The Healthy People 2000 objective is to increase the percent of adults who exercise to 85%.

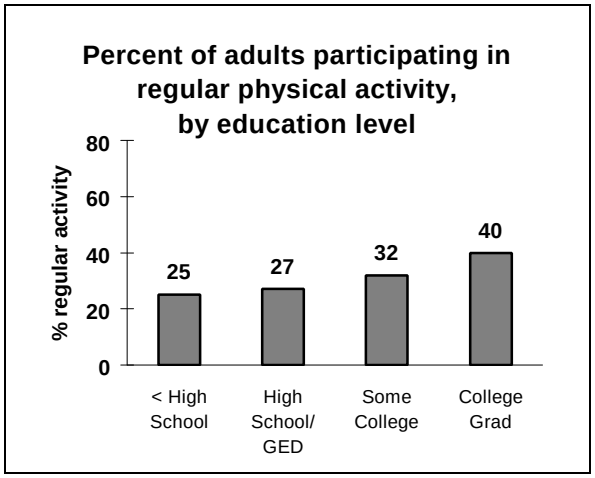

Figure 13 **Source: 1996 Massachusetts BRFSS**

TABLE 1: TOP FIVE EXERCISE CHOICES FOR MEN AND WOMEN

MEN		WOMEN	
walking	33%	walking	54%
running	12%	aerobics class	6%
weight lifting	7%	running	5%
golf	6%	gardening	4%
basketball	5%	health club exercise	4%

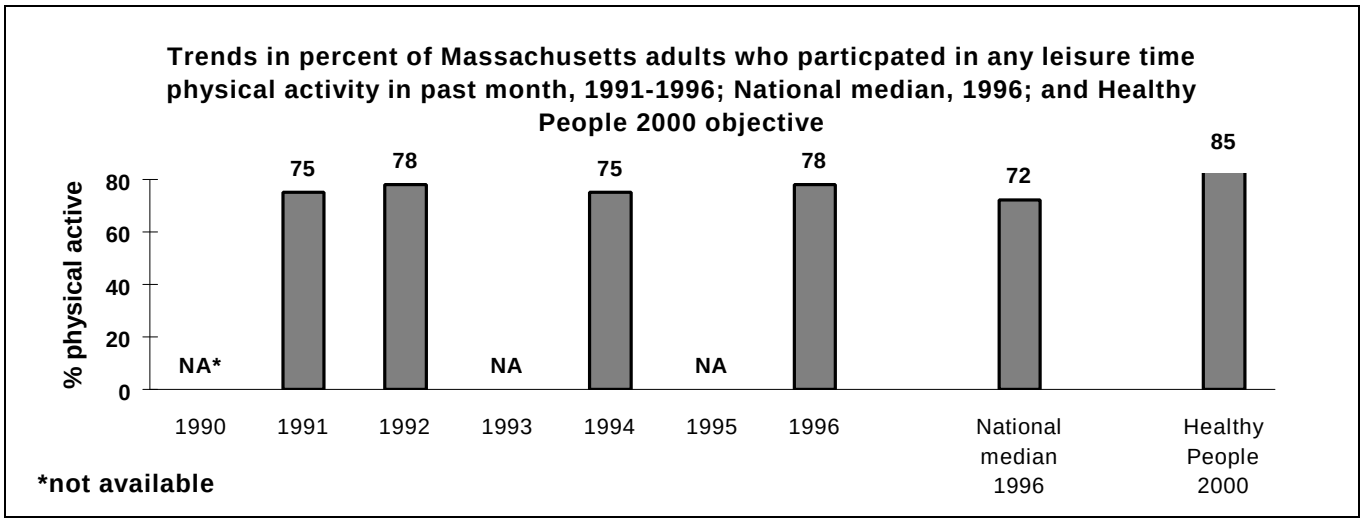

Figure 14 Source: Massachusetts BRFSS, National BRFSS, Healthy People 2000

Diet and Nutrition

The recommended daily allowance of fruits and vegetables for adults is 5 or more servings. In 1996, only 26% of Massachusetts residents met this guideline. Across all age groups, women were more likely than men to meet the recommended fruits and vegetables allowance. Younger adults (figure 15) and people with a high school education or below were less likely to meet this standard.

In 1996, the national median percent of adults who consumed 5 or more servings of fruits and vegetables was 24%. A higher percent of Massachusetts adults met this guideline (26%), and compared to other states, Massachusetts ranked 14th in percent of adults consuming sufficient fruits and vegetables. The proportion of the state's residents meeting this standard has remained essentially the same since 1991 (figure 17).

We defined sufficient calcium intake as either consumption of the recommended daily allowance of dairy products (three or more servings per day) or use of calcium supplements for more than half of the previous month. In 1996, 24% of Massachusetts residents received sufficient calcium. Women were more likely than men to meet this definition (27% vs. 21%).

Men were more likely to get sufficient calcium by dairy consumption, while women were more likely to take in sufficient calcium through supplementation (Figure 16). The proportion of women taking calcium supplements increased with increasing age, and was higher among white women.

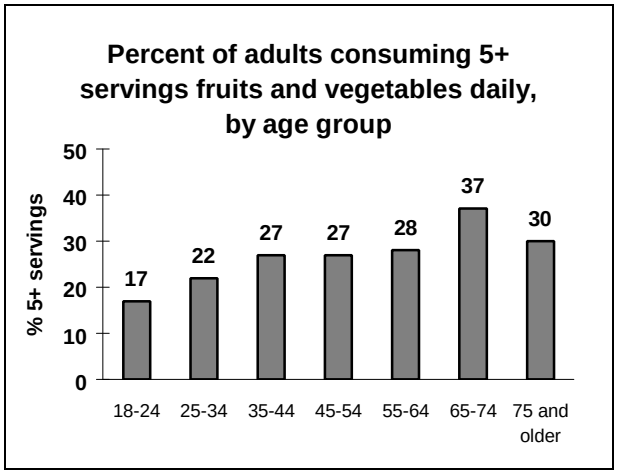

Figure 15 **Source: 1996 Massachusetts BRFSS**

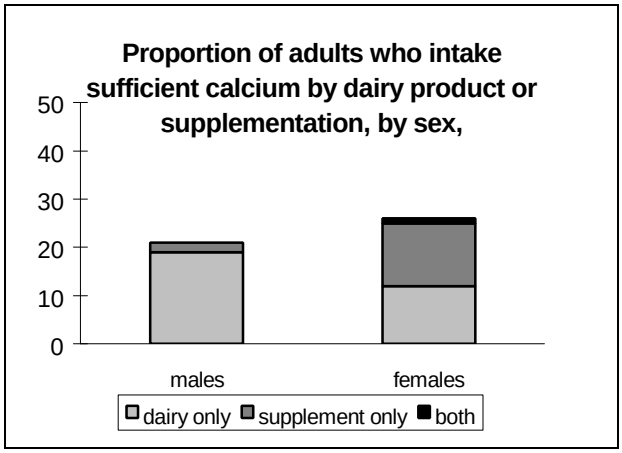

Figure 16 **Source: 1996 Massachusetts BRFSS**

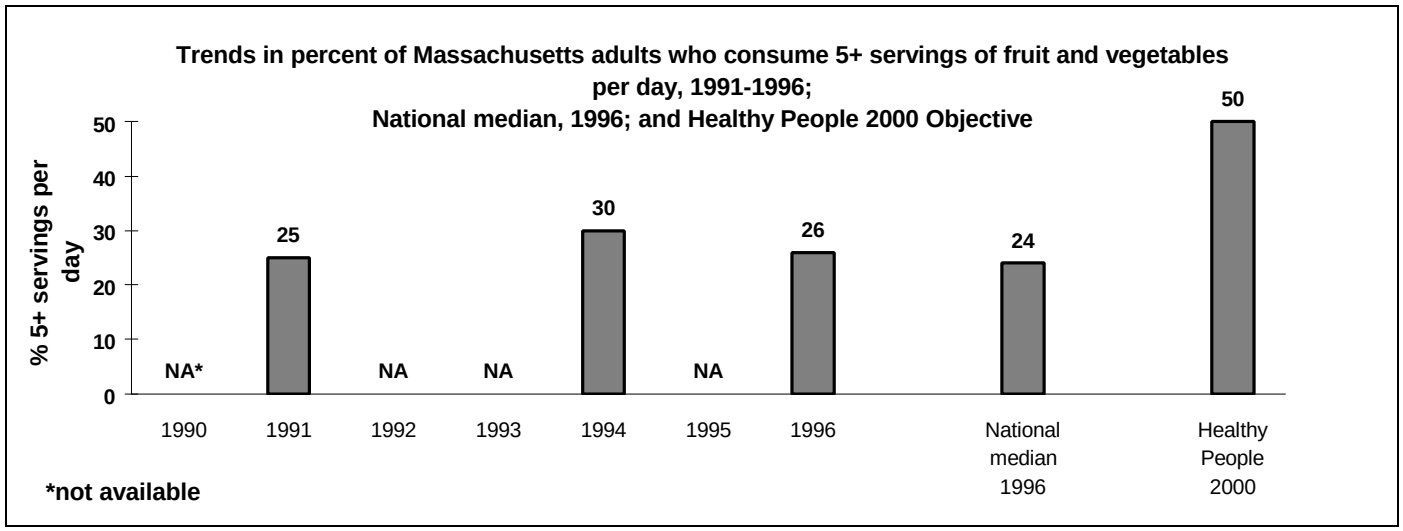

Figure 17 Source: Massachusetts BRFSS, National BRFSS, Healthy People 2000

HIV / AIDS

Among Massachusetts adults age 18-64, 39% reported that they had ever been tested for HIV, the virus that causes AIDS. People age 25-34 (figure 18) and blacks and Hispanics were more likely to have been tested. 14% of adults reported being tested for the HIV virus within the past year.

The main reasons people received testing were to find out if they were infected (25%), as part of a routine checkup (15%), and to apply for life insurance (11%). Among women who were tested, pregnancy was also an important reason (20%) for being tested. Of people who were tested for other than legal or insurance-related reasons, 31% received counseling about the results of their tests, while 60% received no counseling, and 8% did not receive their results.

Adults under the age of 65 were asked to assess their risk of becoming infected with HIV. Overall, 6% described their risk as medium or high, while 34% characterized their risk as low. Persons age 18-24 were more likely to report being at medium or high risk (11%). Hispanics were more likely than other groups to report being at elevated risk (figure 19).

The proportion of Massachusetts residents who have ever been tested for HIV has been increasing since 1993 (figure 20). In 1996, the national median percent of adults ever tested for HIV was 41%. Compared to other states, Massachusetts had a lower prevalence of testing than 37 states.

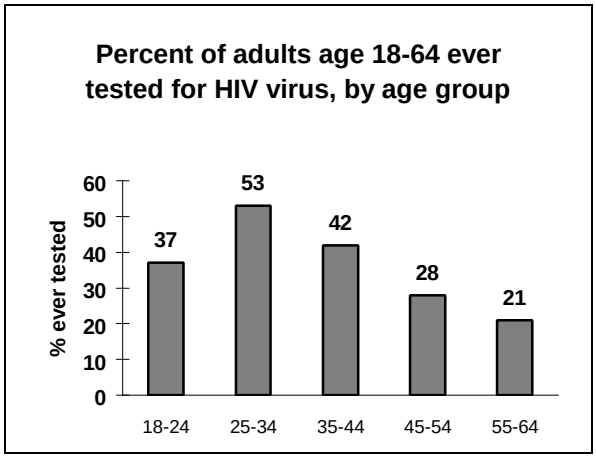

Figure 18 **Source: 1996 Massachusetts BRFSS**

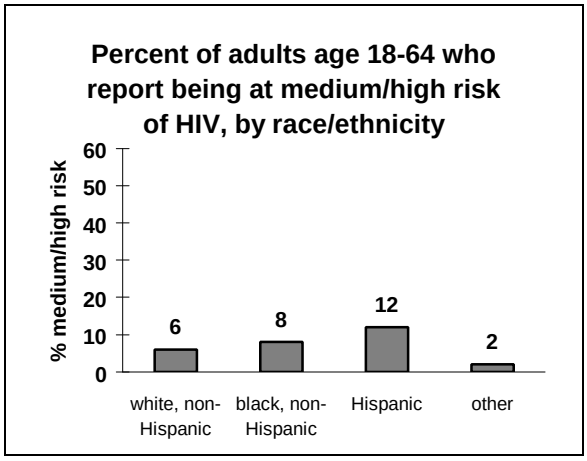

Figure 19 **Source: 1996 Massachusetts BRFSS**

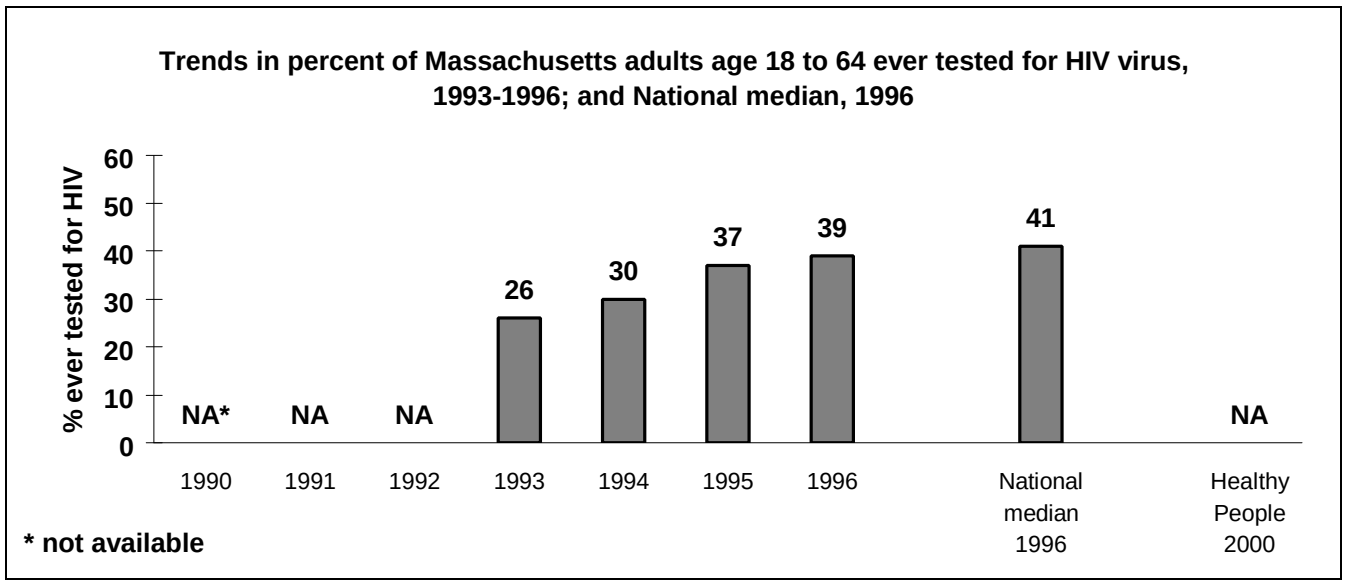

Figure 20 **Source: Massachusetts BRFSS, National BRFSS**

Breast Cancer

Breast cancer is the second leading cause of cancer deaths among Massachusetts women. The main known risk factors for breast cancer are often unalterable. Thus, a primary goal in reducing mortality is early detection of breast cancer through screening.

Mammography is the best early detection tool available. Among Massachusetts women age 40 and older, 77% had a mammogram within the past two years. Mammography rates were highest among women ages 50-74 (figure 21). Uninsured women age 40-64 were less likely (57%) than those with insurance (81%) to have had a mammogram within the past two years.

For women of all ages, a clinical breast exam is another important screening tool. In 1996, 82% of Massachusetts women had a clinical breast exam within the past two years. Rates were uniformly high for women of all ages until age 75 (figure 22).

The breast self exam (BSE) is a self-screening tool recommended to be performed monthly. Ninety-four percent of women knew how to do this exam, but only 50% performed a BSE monthly.

The percent of Massachusetts women age 50 and older who have had both a mammogram and a clinical breast exam within two years has been increasing since 1995 (figure 23). In 1996, 74% of women age 50 and older had both exams, surpassing the Healthy People 2000 objective (60%) and the national median (64%). Massachusetts had the 3rd highest percent of women age 50 and older who have had both a clinical breast exam and mammogram in the nation.

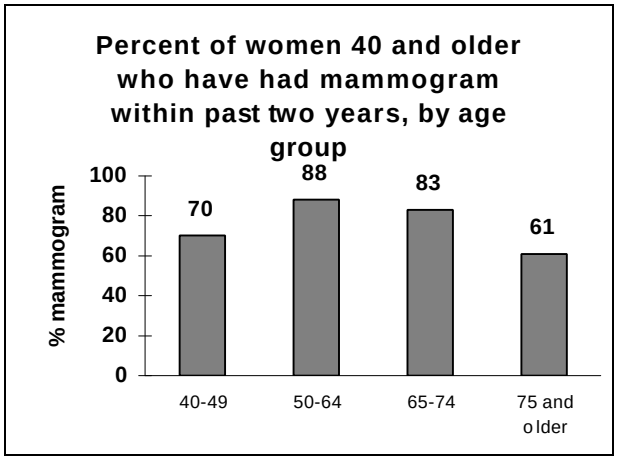

Figure 21 **Source: 1996 Massachusetts BRFSS**

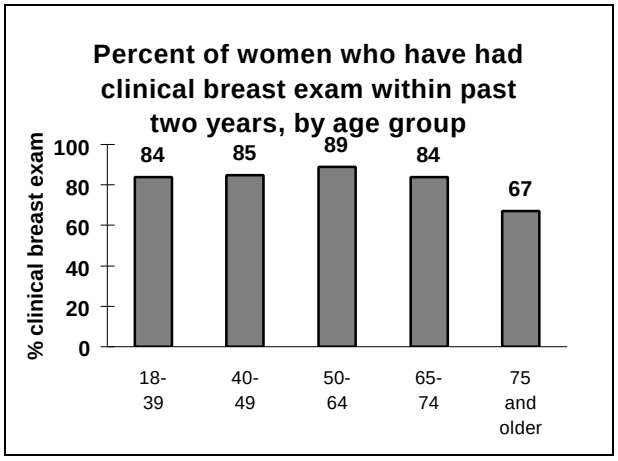

Figure 22 **Source: 1996 Massachusetts BRFSS**

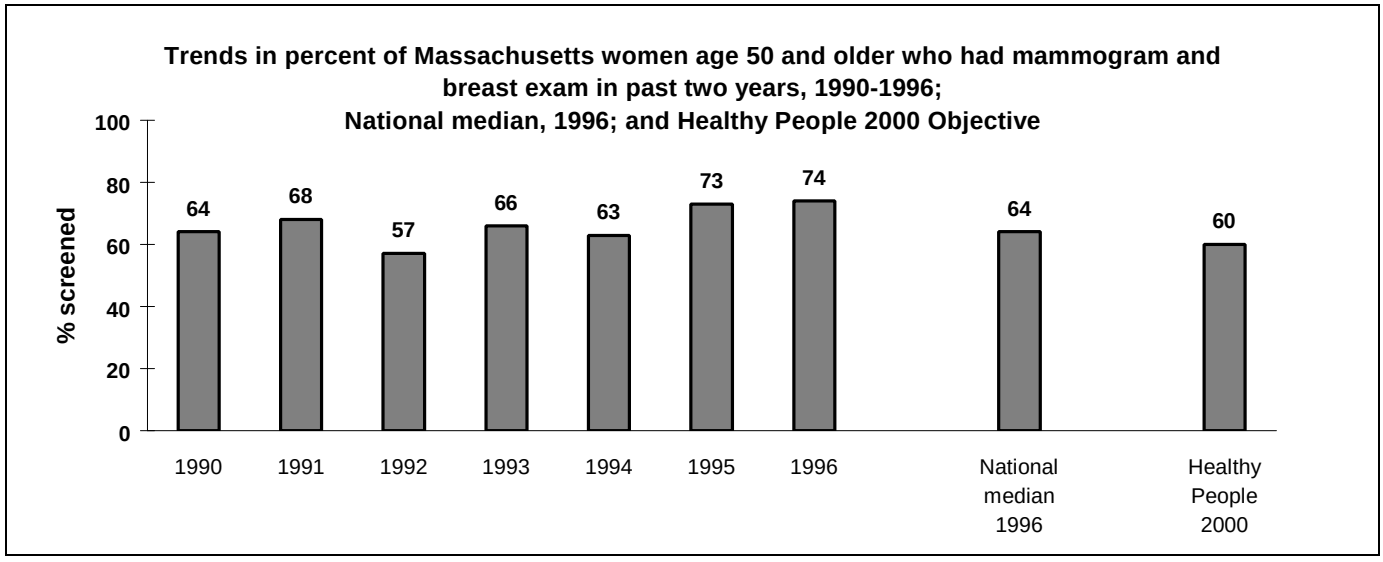

Figure 23 **Source: Massachusetts BRFSS, National BRFSS, Healthy People 2000**

Cervical Cancer

Screening with a Papanicoloau (or 'Pap') smear is an effective tool for detecting early cervical cancer and other abnormalities of the cervix. Early detection has contributed to decreased morbidity and mortality among women.

91% of women age 18 and older had had at least one Pap smear during their lifetime, and 82% of women without hysterectomy had a test within the past three years. Women age 18-24 years (69%), age 65-74 years (72%), and age 75 years and older (44%) were less likely to have had a recent Pap smear than women of other ages. Women with less than a high school education (figure 24) or with lower income were also less likely to have had a Pap smear within three years. Among women age 18-64, a higher percent of women with insurance had a pap smear, compared to those without insurance (figure 25).

The Healthy People 2000 objective is that 85% of women age 18 and older without a hysterectomy should receive a Pap smear at least every three years.[1] In 1996, Massachusetts fell just below this objective and the national median proportion of 85% (figure 26). Massachusetts ranked 27th compared to other states in the percent of women who had a pap smear within 3 years.

[1] Current American Cancer Society screening guidelines recommend women to be tested annually at age 18 or after becoming sexually active. After consecutive negative tests, women at lower risk of developing cervical cancer may be screened less often at the discretion of their physician.

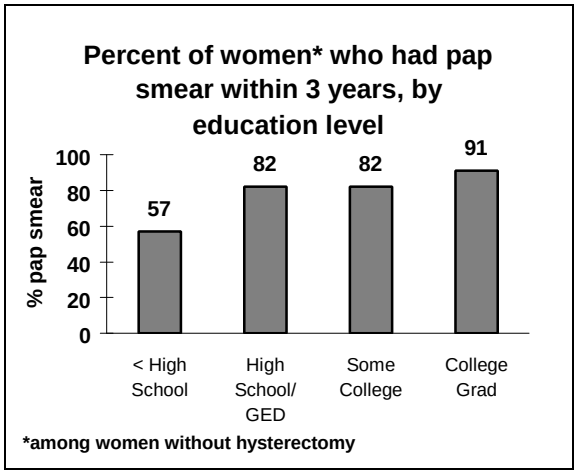

Figure 24 **Source: 1996 Massachusetts BRFSS**

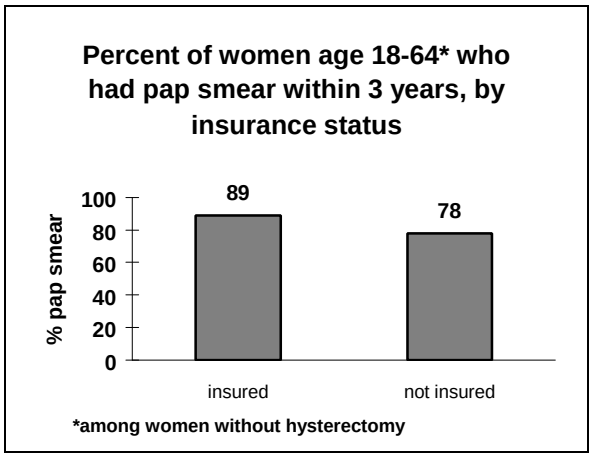

Figure 25 **Source: 1996 Massachusetts BRFSS**

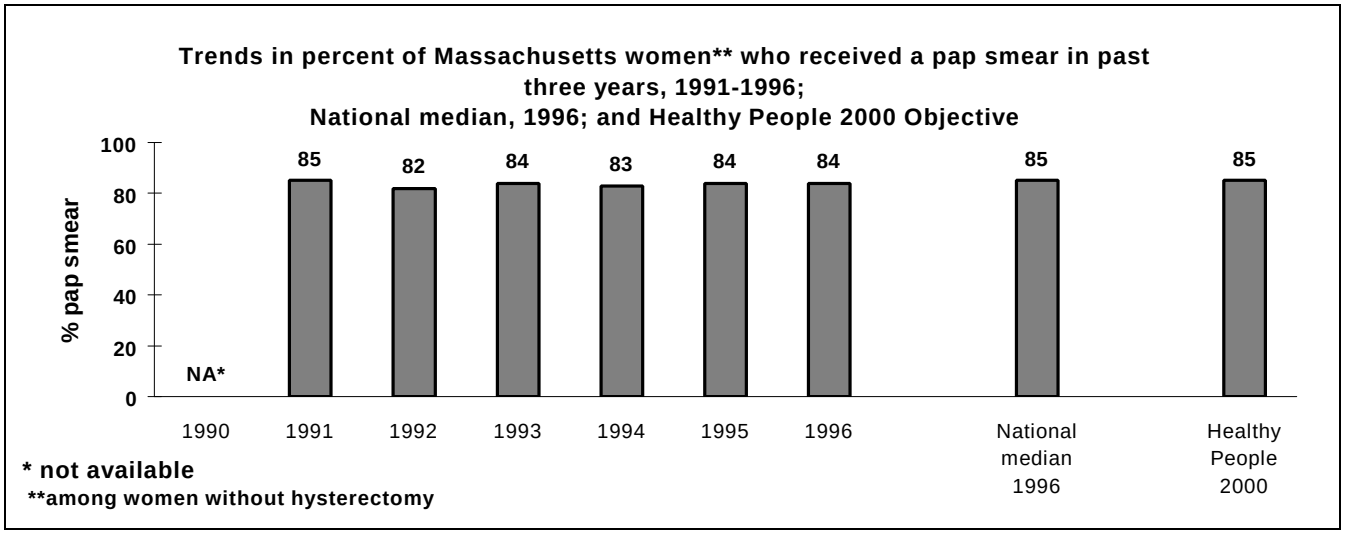

Figure 26 **Source: Massachusetts BRFSS, National BRFSS, Healthy People 2000**

Violence

In 1996, 2% of Massachusetts adults were hurt[1] by violence. Women and men were equally likely to have been hurt within the year. 15% of men and 20% of women responded that they had been hurt at least once in their life.

The relationship between those ever hurt and their perpetrator was different for men and women (Figure 29). Men were more likely to have been hurt by a friend or stranger, while women were more likely to have been hurt by an intimate partner.[2] Among all Massachusetts adults, 3% of men and 14% of women have been hurt at least once by an intimate partner.

27% of women ever hurt by an intimate partner experienced the violence within the past 5 years. Women who were divorced or separated were five times more likely to have been hurt by an intimate partner in this time compared to married women. Women with less than a high school education were four times more likely to have experienced intimate partner violence in the past 5 years. 59% of all women hurt by a partner within the past 5 years were age 18-29.

Women who experienced intimate partner violence in the past 5 years had relatively poor mental health status. These women were more likely to describe their mental health as poor for one week or longer in the previous month, compared to women who were not hurt within the past 5 years (Figure 27). There were smaller differences in the percent who experienced poor physical health.

Overall, 57% of women hurt by an intimate partner in the past 5 years used any medical or police services (Figure 28).

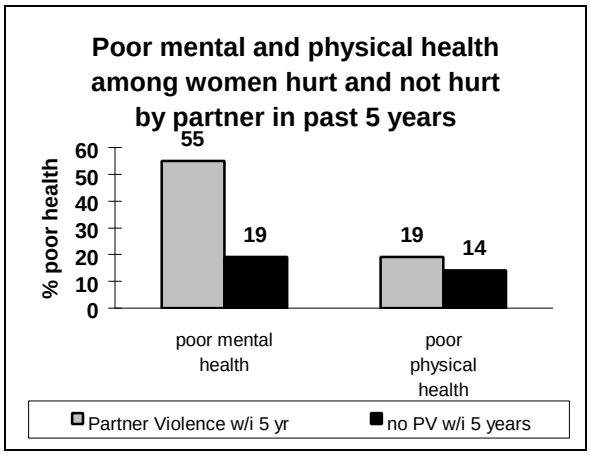

Figure 27 **Source: 1996 Massachusetts BRFSS**

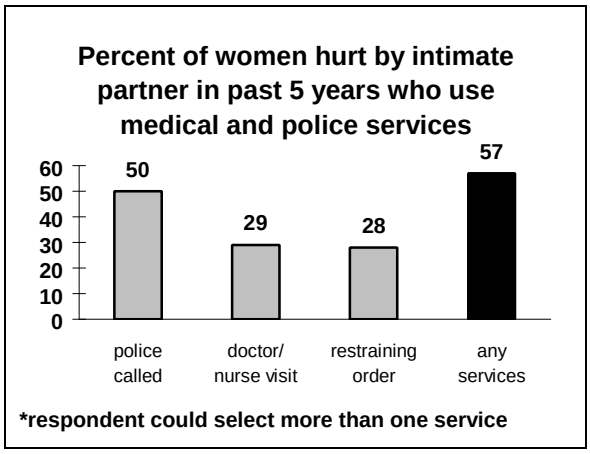

Figure 28 **Source: 1996 Massachusetts BRFSS**

[1] Hurt included being shoved, slapped, hit with an object, or forced into sexual activity.

[2] Intimate partner is a current or former spouse, partner, boyfriend, girlfriend, or date.

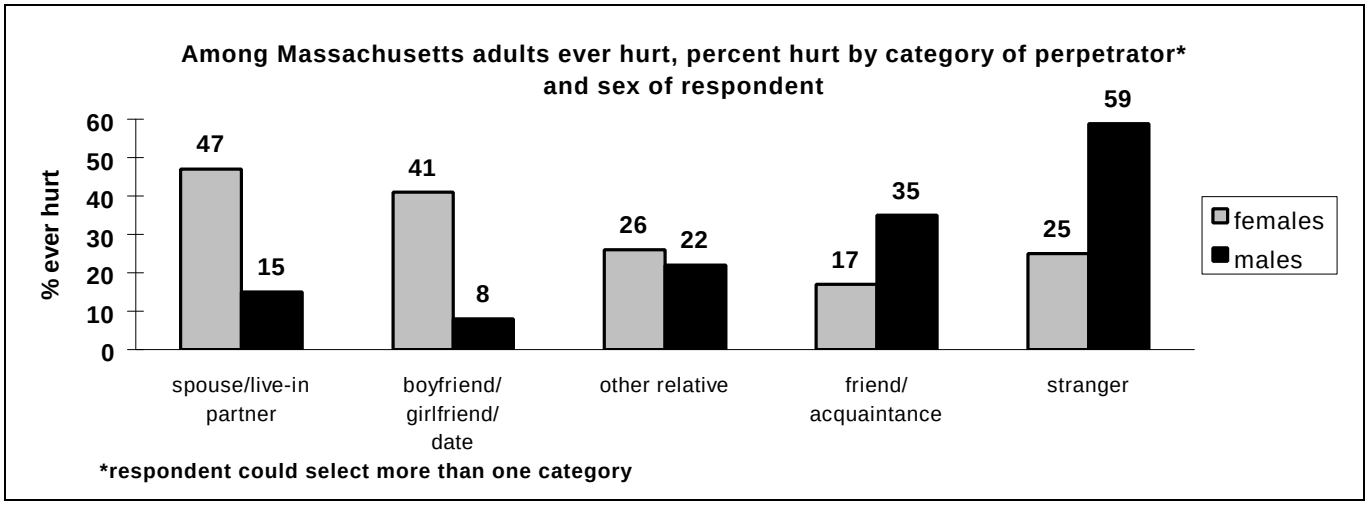

Figure 29 **Source: 1996 Massachusetts BRFSS**

Methodology

The BRFSS has been conducted in Massachusetts since 1986 as a cooperative effort between the federal Centers for Disease Control and Prevention and the Massachusetts Department of Public Health (MDPH). In 1996, the BRFSS was conducted for the MDPH by Northeast Research of Orono, Maine, using a list-assisted random-digit-dial sampling methodology. Telephone numbers were randomly selected, and multiple attempts were made to reach each phone number. To be eligible for the survey, the telephone had to serve a household in which at least one adult eighteen years or older resided. Institutions, group quarters of ten or more unrelated adults, and temporary residences being occupied for less than a month, such as summer homes, were excluded. One adult from each household was randomly selected to complete the interview. No proxy respondents or substitutions were allowed if the selected adult was unable to complete the interview for any reason, such as a language barrier, disability, or lack of availability. In addition to English, the survey was also conducted in Spanish and Portuguese.

A total of 3,041 interviews were completed in 1996. The overall response rate to the 1996 survey was 58% calculated by the CASRO method. Among households determined to be eligible, interviews were completed in 65%. Interviews were not completed in 2% of households due to language barriers and in 1% of households due to disability of the selected respondent.

Potential sources of error in the BRFSS should be taken into account when interpreting the data. First, households without telephones do not have the opportunity to be included in the sample. According to the 1990 census, only 2% of Massachusetts households do not have a telephone, but 10% of households below poverty level lack a phone. Adults in households with telephones may not be captured by the survey, either due to barriers such as language or disability or due to lack of interest. Because it is based on self-report, the data in the BRFSS are subject to reporting biases. Respondents may overreport socially desirable behaviors, while underreporting behaviors they perceive to be socially unacceptable. Respondents may also have difficulty recalling the frequency or time frame of various behaviors. Finally, because the BRFSS surveys a randomly selected sample of Massachusetts adults, results may differ to some extent from another random sample taken from the same population due to chance.

Data on selected variables from the BRFSS are available through the Massachusetts Community Health Information Profile (MassCHIP), an Internet-accessible information service available from the Massachusetts Department of Public Health. Information about how to register as a MassCHIP user is available through the MDPH home page located at: http://www.magnet.state.ma.us/dph/dphhome.htm

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